

Work Order ID 153478

Monday, November 21, 2016 9:23:19 AM

153478

Page 1

Item ID: D3793-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Wearplate Fwd

Start Date: 11/15/2016 Start Qty: 12.00

12

Cust Item ID:

Required Date: 11/21/2016 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals:

Process Plan:

DAS

21

9-89

Date: NOV 21 2016

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3793

Rev A

100

0.02

100

Waterjet

FLOW WATER JET

Memo

0.24

FLOW CNC Waterjet

1-Cut as per Dwg D3793 Dwg Rev: A Prog Rev: A 2-
Debur if necessary

(12)

Della/11/25

110

0.00

110

QC

QC2- Inspect parts off machine FAI/FAIB

Memo

0.02

Quality Control

(12)

Della/11/25

120

0.00

120

QC

QC8- Inspect parts - second check

Memo

0.04

Quality Control

12

DAS
38
9-89

NOV 25 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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				Lead hand / Supervisor Approval Verification																	
				QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																
OTHER :																					

Work Order ID 153478

Monday, November 21, 2016 9:23:19 AM

153478

Page 2

Item ID: D3793-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Wearplate Fwd
Start Date: 11/15/2016 Start Qty: 12.00 ***12*** Cust Item ID:
Required Date: 11/21/2016 Req'd Qty: 12.00 ***12*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Brake NC	NC BRAKE	0.02							NOV 28 2016
	Memo	0.04			DAS 30 9-89	12			
Brake NC	1-Deburr if necessary2-Form on Brake as per Dwg D3793 using Jigs 3-Form Joggle on brake using Jig as per Dwg D3793								
140 *140* QC	QC5- Inspect part completeness to step on W/O	0.00							DAS 38 9-89
	Memo	0.04				12			
Quality Control									NOV 28 2016
150 *150* Powdercoat	Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3	0.00							
	Memo	0.02							
Powder Coating	START TIME: 2:15 FINISH TIME: 2:45 OVEN TEMPERATURE:					12	16	11-20	DAS 34 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Page 3

Item ID: D3793-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Wearplate Fwd
Start Date: 11/15/2016 Start Qty: 12.00 ***12*** Cust Item ID:
Required Date: 11/21/2016 Req'd Qty: 12.00 ***12*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC3- Inspect Part Finish	0.00							
160									
QC	Memo	0.02							DAS 9 9-89
Quality Control									
170	Identify as per dwg & Stock Location: <u>FP000</u>	0.00							
170									
Packaging	Memo	0.02							
Packaging	<u>LOCATION ; FP002</u>								12x of all 10/12/01
180	QC21- Final Inspection - Work Order Release	0.00							
180									DAS 21 9-89 DEC 12 2016
QC	Memo	0.20							
Quality Control									

16-12-1

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐			FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER : ☐					

Picklist Print

Monday, November 21, 2016 9:23:19 AM

Page 1
1

Work Order ID: 153478

153478

Parent Item: D3793-1

D3793-1

Parent Item Name: Wearplate Fwd

Start Date: 11/15/2016

Required Date: 11/21/2016

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev:A 08-05-13 new issue DD verified by:EC
IPP Rev:B 08-05-23 revA as per dwg DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S20GA		Purchased		No		100	sf	125.3210	0.5902	7.455158			

M304S20GA

Dele 11/24

304/316 .040 Sheet

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT020	124.5	
m134495	0.2	
m134982	0.1	
m135327	71.7	
m135689	52.5	8.7
MAT20	0.821	
m133901	0.821	

DQA: _____ Date: _____



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OTHER :																					

DART AEROSPACE LTD		Work Order: 153478
Description: Wearshoe		Part Number: D3793-1
Inspection Dwg: D3793	Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

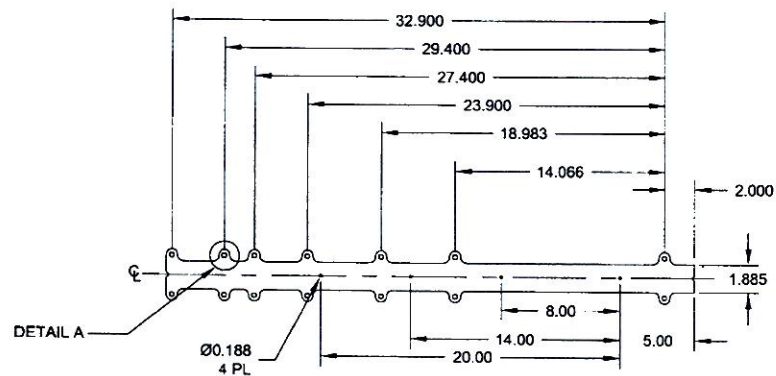
☒ First Article
 ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.188	+0.005/-0.001	0.188	✓		V=Dr-02	
0.300 x 0.300	+/-0.010	0.301 x 0.300	✓			
1.885	+/-0.010	1.889	✓			
2.000	+/-0.010	2.003	✓			
5.00	+/-0.030	5.00	✓			
8.00	+/-0.030	8.00	✓			
14.00	+/-0.030	14.00	✓			
20.00	+/-0.030	20.00	✓			
14.066	+/-0.010	14.066	✓			
18.983	+/-0.010	18.983	✓			
23.900	+/-0.010	23.900	✓			
27.400	+/-0.010	27.400	✓			
29.400	+/-0.010	29.400	✓			
32.900	+/-0.010	32.900	✓			
0.040	+/-0.010	0.036	✓			

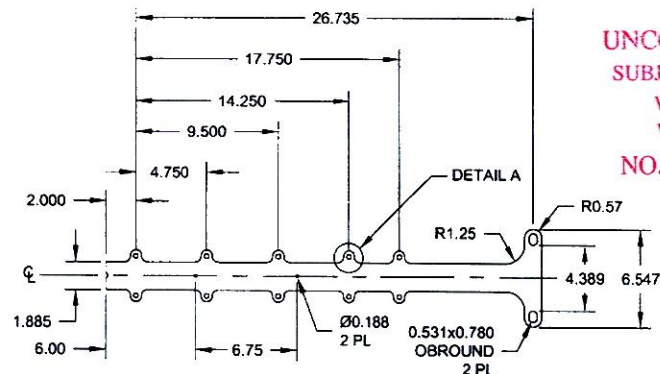
Measured by: <i>Dr</i>	Audited by: <i>DAS 38</i>	Prototype Approval: N/A
Date: 16/11/24	Date: NOV 25 2016	Date: N/A

Rev	Date	Change	Revised by	Approved
A	08.05.30	New Issue	KJ/DD	<i>[Signature]</i>

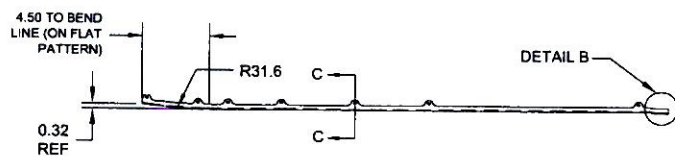
8 7 6 5 4 3 2 1



D3793-1F FLAT PATTERN



D3793-3F FLAT PATTERN



D3793-1 BEND DETAIL
(MAKE FROM D3793-1F)



D3793-3 BEND DETAIL
(MAKE FROM D3793-3F)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 153478

16/11/21

RELEASED
08.05.14

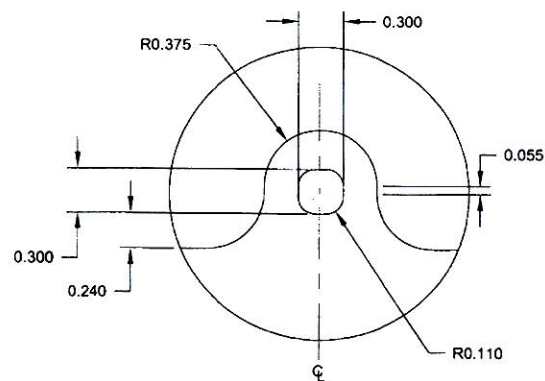
NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET PER AMS 5513 OR AMS 5524, 20 GAUGE (0.038 THICK)
(REF DART SPEC M304S20GA)
- 2) FINISH: POWDER COAT GREY SANDEX (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "DXXXX-X" ON INSIDE SURFACE USING FINE POINT PERMANENT INK MARKER OR LABEL AFTER FINISH
- 7) WEIGHT: D3793-1 - 0.72 LBS, D3793-3 - 0.66 LBS

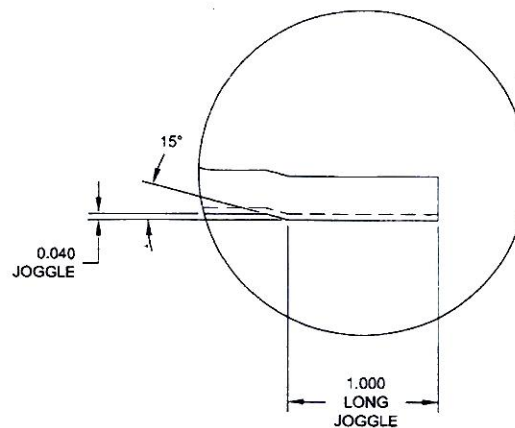
REV.	DESCRIPTION	PH	DATE
A	NEW ISSUE	PH	08.05.14
DESIGN	PH	PH	
DRAWN	PH	PH	
CHECKED	PH	PH	
MFG. APPR.	PH	PH	
APPROVED	PH	PH	
DE APPR.	PH	PH	
DATE	08.05.14		

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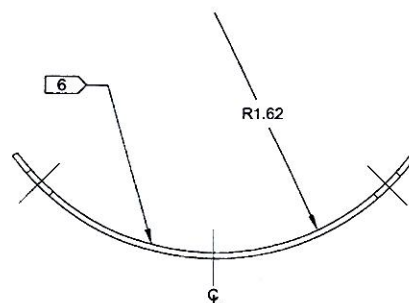
8 7 6 5 4 3 2 1



DETAIL A
SCALE 10X



DETAIL B
SCALE 10X



SECTION C-C
SCALE 10X

RELEASED
08-05-14

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	PH	PORT HADLOCK, WA	
CHECKED	PH	DRAWING NO.	REV. A
MFG. APPR.	PH	D3793	SHEET 2 OF 2
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	WEARSHOE	NTS
DATE	08.05.14	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PREPARED BY DART AEROSPACE USA, INC. AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8 7 6 5 4 3 2 1